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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,818	03/17/2004	Jiaren Jiang	942418	2516
33798	7590	08/11/2005	EXAMINER	
ANISSIMOFF & ASSOCIATES RICHMOND NORTH OFFICE CENTRE SUITE 201 235 NORTH CENTRE RD. LONDON, ON N5X 4E7 CANADA			LIN, ING HOUR	
		ART UNIT		PAPER NUMBER
		1725		
DATE MAILED: 08/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,818	JIANG ET AL.	
	Examiner Ing-Hour Lin	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 March 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 7-8, 10-12, 14-15, 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Abbott et al.

Abbott et al (col. 3, lines 57+) teach the claimed method of modifying a surface of a metal casting, comprising: placing a perforated mask 30 made of metal coated with silicone or polyurethane with a casting mold 10 made of material withstanding high temperature such as steel, ceramic; spray the masked area with coating a wide variety of coatings and multi-layers and materials including aluminum oxide from a thermal spray system 24; removing the mask and casting molten metal such as magnesium.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al in view of Turchan et al.

Abbott et al fail to teach the use of pre-treatment before coating. However, Turchan et al (col. 19, lines 12+) teaches the use of laser treatment for the purpose of locally heating the steel substrate and better the subsequent coating. It would have been obvious to one having ordinary skill in the art to provide Abbott et al the use of laser treatment as taught by Turchan et al in order to effectively treat the mold surface for better coating.

7. Claims 3, 5-6, 9, 16-19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al in view of Tselesin.

Abbott et al fail to teach the use of mask having a particular size and mesh. However, Tselesin (col. 4, lines 19+) teaches the use of mask having a particular size and thickness compactable with the size of coating particles such as $2 \text{ to } 10 \times 10^{-6}$ of a linear dimension/size of hard particle (col. 10, lines 2+) and mesh including retaining steel wire, foil or plate (col. 11, lines 25+) for the purpose of effectively coating the substrate or mold surfaces. It would have been obvious to one having ordinary skill in the art to provide Abbott et al the use of mask having a particular size and mesh as taught by Tselesin in order to effectively coat and treat the mold surface for better coating and casting function surface layers.

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8. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al in view of JP 53125236.

Abbott et al fail to teach the use of molten metal including iron-based alloy. However, JP '236 (see abstract) teaches the use of steel in casting steel material possessing wear resistance on surface layer for the purpose of casting wear resistant steel member. It would have been obvious to one having ordinary skill in the art to provide Abbott et al the use of molten steel as taught by JP '236 in order to effectively produce wear resistant steel member.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ing-Hour Lin whose telephone number is (571) 272-1180. The examiner can normally be reached on M-F (8:00-5:30) Second Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I.-H. Lin
8-5-05

KEVIN KERNS *Kevin Kerns 8/8/05*
PRIMARY EXAMINER